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WORKING CAPITAL MANAGEMENT AND ORGANIZATION PERFORMANCE: THE RELATIONSHIP BETWEEN WORKING CAPITAL MANAGEMENT AND ACCOUNT RECEIVABLE

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ABSTRACT

This study examined working capital management and organizational performance of selected metal manufacturing companies in Osun State, Nigeria. Specifically, the study examined the effect of accounts receivable, accounts payable, and inventory on performance of metal firms. The study made use of secondary data obtained from the 2000-2015 annual reports of the sampled companies. Data obtained were analyzed using the Levin, Lin and Chen unit root test, the panel co-integration test (to ascertain if there exists long run co-movement among the variables), and fixed effect panel regression. The result showed that, account receivable was significant on the profitability of the firm. The account receivable accounted for over 78 percent of the profit, which implied that one percent increase in accounts payable raised the profit margin of the metal firms to 55 percent. Inventory in the selected metal companies revealed a strong positive and significant impact on profitability investment at 1%, 5% and 10% levels of significance. Accordingly, the study concluded that, as a matter of policy: accounts receivable which was a larger source of the firm's profitability should be strategically enhanced. It was recommended that measures should be put in place by the management of the Metal Companies to enhance sales promotion of the firm's products.

Keywords: *Working Capital, Cash cycle, Inventory, Trade discount, Accounts Receivable, Accounts Payable*

INTRODUCTION

Working capital management is one of the most important duties of business financial managers. This is so because the most important reason for financial distress among business firms, especially small firms, is the lack of attention to management of working capital-cash, short-term securities, receivables, and inventories. Working capital plays the same role in a business that the heart plays in human body. A strong man with a weak heart will soon die of poor circulation of blood, similarly a business can die of poor circulation or lack of working capital (circulating fund) which

includes cash-the life blood of business. It follows that careful and efficient management of working capital, not only reduces the likelihood of business failure but also contributes positively to the firm's profitability. Poor management of working capital means that funds are unnecessarily tied up in the asset hence reducing liquidity and also reducing the ability to invest in productive assets such as plant and machinery, so affecting profitability. It is generated and circulated in the business and when this circulation stops, the business becomes lifeless. Hence, working capital is seen as the circulating capital in the business operations (Erich & Helfert, 2001). Maintaining liquidity is crucial for the going–concern of the business. Liquidity is a pre-condition which ensures that organizations are able to meet their short-term obligations and their continued flow of operation can be guaranteed from a profitable venture (Gitman, 2005). According to Pandey (2005), working capital management is among the four cardinal decision areas of financial management, which every business organization has to make. Working capital management is mostly focused on the management of current assets and current liabilities of companies. Optimal working capital management positively contributes to the creation of organization value. On the other hand, cost of liquidity brings a serious problem and stands against profitability (Dong & Su, 2010).

Also, management has a dual interest in the analysis of financial performance such as, to assess the efficiency and profitability of operations and to judge how effectively the resources of the business are being used (Erich & Helfert, 2001). In order to have better understanding of working capital, it is necessary to evaluate the meaning of current assets and current liabilities. It is rightly observed that "Current assets have a short life span. These types of assets are engaged in current operation of a business and are normally used for short– term operations of the firm during an accounting period i.e. within twelve months. If organizations do not care about liquidity, they may face the problem of insolvency. For this reason, managers of organizations should give proper consideration to working capital management as it will ultimately affect the profitability of the organizations. Also, companies can achieve maximum profitability and maintain adequate liquidity with the help of efficient and effective management of working capital. Efficient working capital management leads to improved operating performance of the business concern and it helps to meet the short term liquidity (Paramasivan & Subramanian, 2009).

The problem is that conflicting objectives such as, increasing profits at the cost of liquidity can bring serious problems to the organization, hence, one

objective should not be at the cost of the other. One popular measurement of working capital management is Cash Conversion Cycle, that is, the time span between the expenditure for the purchases of raw materials and the collection of sales of finished goods. However, corporate profitability might decrease with the cash conversion cycle, if the cost of higher investment in working capital rises faster than the benefits of holding more inventories or granting more trade credit to customers. Business successes heavily depend on the ability of financial executives to effectively manage receivables, inventory, and payables (Filbeck & Krueger, 2005). Firms can reduce their financing costs and/or increase the funds available for projects expansion by minimizing the amount of investment tied up in current assets. Most of the financial managers' time and efforts are allocated in bringing non-optimal levels of current assets and liabilities back toward optimal levels (Lamberson, 1995). Furthermore, working capital management have been considered as the main central issues in the metal manufacturing companies and managers are trying to identify how to maintain a favorable level of working capital. Due to the nature of her business, the metal manufacturing companies need to keep a minimum working capital to cushion the effect of an upsurge in the demand of metals and to continually be a going concern. However, not minding the enormous need to raise the level of working capital, its excess possesses huge danger to the organization. An excess of current assets may have a negative effect on the firm's profitability whereas a low level of current assets may lead to a lower level of liquidity and stock outs resulting in difficulties in maintaining smooth operations (Horne & Wachowicz, (2004). Conclusively, working capital management amongst metal manufacturing firms does not only imply an improvement in the financial performance of daily cash-strapped system, but seeks to meet the organizations' daily financial operation.

In this era of rapid environmental changes, various components of metal manufacturing companies are variously affected. On the input side, the costs of raw materials (direct and indirect) and labor are rapidly increasing, cost of borrowing continues to rise and likewise, cost of maintenance is ever increasing. In such a situation, budgets might need to be revised and there is need for concomitant increase in working capital. In all, working capital must be astutely managed to enhance profitability and perhaps provide some assurance that the company's going concern status is not threatened. Most often, company operations are plagued with poor working capital management, most especially during the early stages of the business. This might be as a result of inadequate knowledge of working

capital management or low skilled management level due to inadequate funding to acquire the needed expertise. It is noteworthy that finance directors are saddled with efforts to maintain a balance between current assets and current liability at optimal level. Poor or careless financial management is a major reason for failure of small businesses. This neglect can, in worst cases lead to the downfall of a company, even if it has a high performance (Pass & Hike, 2007). On the other hand, companies that failed to prioritize working capital management suffer anomalies in their daily operations. A poor or inefficient working capital management can lead to excess funds being tied down in inventory or owed by the company's customers; such funds cannot be used to meet the company's obligations (Reddy & Kameswari, (2004). Given the above type of situation and the vulnerability of the business to fluctuation in the level of working capital, they often end up starving business of cash due to a mismatch of current asset and current liabilities affecting organization's performance (Sanger, 2001). Furthermore, without an efficient working capital management, millions of losses can happen in a firm annually. Hence, it is very important for a business to understand the way to manage working capital efficiently and the effects this has on the performance and growth of the business. Working capital management enables an organization to react quickly and appropriately to unanticipated changes in market variables, such as interest rates and raw material prices, and gain competitive advantages over its rivals (Filbeck & Krueger, 2005).

Also, the impact of account receivable on profitability level of an organization has not been really studied theoretically. Kumar (2010) concludes that the reported profitability of a company is influenced to a large extent by the rate at which the debtors of an organization are able to meet promptly their obligations to the organization. The problem of how to persuade the various debtors of organization to continually meet their obligations in order to improve the profitability position of the firm is the major concern of management of organizations according to him. The need for organization management to match their accounts receivable with the expected profitability position is the focal concern of executive management forum in Ganesan (2007). This is due to the fact that account receivable encompasses all receivable incomes needed for profit appraisal. In addition, the inability of manufacturing concerns to match expectedly their accounts payable with the expected incomes level in order to arrive at proper profitability position has been the major concern of management of organization. This problem of relating account payable with profit level of organization was first considered by Akinwande (2009) when he pointed

out that substantial numbers of manufacturing companies failed in Nigeria due to the inability of the responsibility officers to match correctly creditors' entitlements with the actual incomes before arriving at the expected profitability position. Therefore, this study will focus also in investigating the impact of account payable on profitability of manufacturing companies particularly metal manufacturing companies in Nigeria. Meanwhile, the stock of inventory is a major problem to manufacturing companies in Nigeria. This is so because too much stock in inventory can create additional costs of production for the manufacturing company concerned. Inventory must be kept at a reasonable level in order not to add more to cost than to revenue. Continuous creations of inventory without continually create expected demand for the inventory can spell doom for the organization's profitability. Manufacturing companies should keep inventory in excess of acceptable standard if they are sure of anticipatory demand. Excess inventory in stock can affect the production capacity of manufacturing organizations. It can lead to avoidable manufacturing wastage and cause the organization financial loss that may be irredeemable now and in future. On the basis of the foregoing, this paper intends to evaluate the impact of working capital management on organizational performance.

OBJECTIVES OF THE STUDY

The broad objective of this study is to examine working capital management and organizational performance in selected metal manufacturing companies in Osun State, Nigeria. The specific objectives are to:

(i) Ascertain the effect of Account receivable on profitability of selected metal manufacturing companies in Osun State, Nigeria.
(ii) Determine the effect of Accounts payable on profitability of selected metal manufacturing organizations in Osun State, Nigeria.
(iii) Assess the effect of inventories on profitability of selected metal manufacturing organizations in Osun State, Nigeria.

RESEARCH QUESTIONS

(i) What is the relationship between Accounts Receivable and profitability of selected metal manufacturing companies in Osun State, Nigeria?
(ii) Does Accounts Payable play any role in the profit realized by selected metal manufacturing companies in Osun State, Nigeria?

iii) Does inventory have any significant impact on selected metal manufacturing firms' profitability in Osun State, Nigeria?

RESEARCH HYPOTHESES

H_{01}: There is no significant relationship between working capital management and performance of selected metal manufacturing organization in Osun State, Nigeria**.**

H_{02}: There is no significant relationship between working capital management and performance of selected metal manufacturing organization in Osun State, Nigeria**.**

H03**:** There is no significant impact between inventory and the selected metal manufacturing organizations' profitability in Osun State of Nigeria.

SIGNIFICANCE OF THE STUDY

The findings of this study will have implications for other companies that are trying to make decisions regarding working capital management reforms. This study would reveal how essential working capital management strategies such as policies, practice and techniques are operational for the metal manufacturing companies in Osun-State, Nigeria in terms of performance. Findings of this study would help to develop an understanding of the advantages and disadvantages of financial practices and techniques of managing working Capital Components in metal company's paradigms. Companies with efficient working capital management can reduce their dependence on outside funding, and use the released cash for future investment; this will then lead to more financial flexibility (Shin & Soenen, 1998). This study is very important for the managers of metal firms because it will help them to set trade-off between their account payable and the performance of their company. The result of the study will also help in providing basic guidelines for decision making for researchers, accountants and professionals, financial managers, and policy makers in the metal manufacturing company's environment in Osun state. Moreover, this study would help in pointing out strategies and measuring instruments the management of the metal manufacturing companies can use to manage their working capital in their day to day decision making for the firm. The findings will also help assess the effectiveness of working capital management on organizations' performance in the studied companies for program evaluation.

LITERATURE REVIEW

According to Ernest and William (1975), there are two general working capital concepts; net and gross. Net working capital is the difference between current assets and current liabilities, it is positive when current assets exceeds current liabilities and vice versa. Current liabilities are obligations that require cash payments within one year (Hillier, Ross, Wester, field, Jaffe & Jordan2010). Working capital is useful to some degree to groups interested in determining the amount and nature of assets that may be used to pay current liabilities. The amount that is remained after these debts are paid may be used to meet future operational needs.

On the other hand, gross working capital refers to the amount of fund invested in current assets that are employed in the business process. Since, it is these assets that financial managers are concerned with if they are to bring about productivity from other assets. Working capital was classified in two:

Directly related to the gross concept of working capital: That is working capital may be classified as capital invested in the various components of current assets such as cash, inventories receivables and short-term unexpired costs. This classification is most important to management, but it is not completely adequate, since it makes no mention of time and since that time is vital in the formulation of procurement policies.

Working capital alluding to time: Using time as a basis, working capital may be classified as permanent or temporary. Permanent working capital is the amount of funds required to produce the goods and services necessary to satisfy demand at its lowest point such as capital that possesses the following attitudes: unlike fixed assets, which retain their form over a long period of time, permanent working capital is constantly changing from one asset to another. The fund of value representing permanent working capital never leaves the business process and suppliers should not expect its return until their need ceases to exist. The size of the permanent working capital account will increase when a firm experiences growth. Temporary or variable working capital changes its form from cash to inventory to receivables and back to cash, but it differs in that it is not always gainfully employed. Therefore, the business that is seasonal and cyclical in nature requires more temporary working capital than firms that are not so influenced. So managers should obtain the capital that is temporarily invested in current assets from sources that will allow its return when not in use. When the policy is followed, the turnover of investment will be more favorable, permitting a more efficient use of

capital. Working Capital Management is an important area in financial management. The main goal of working capital management is to keep an optimized balance between each component of working capital (Gitmen, 2009). Several factors influence the growth and profitability of any corporations and working capital is one important factor. Inadequate levels of working capital could lead to problems with day-to-day operations (Horne & Wachowicz, 2000). Current assets are those assets that generate cash within one year and can be found on the left side of the financial statement while current liabilities can be found on the right side of the financial statement. They are obligations which have to be met within one year. Current assets consist of cash and cash equivalents, short-term investments, trade and other receivables, prepaid expenses, inventories and work-in-progress. Current liabilities include trade payables, short-term debt and accrued liabilities. There are four drivers of working capital: cash, account receivable, inventory and account payable.

Generally, financial management decision can be divided into management of assets (investment) and liabilities (source of financing) in the short term and long term respectively. Investigation shows that firms' performance cannot enjoy spontaneous increase in the long run without effective short term working capital management. According to Michna (2007), efficient management of liquidity is particularly important for small firms at a time of economic downturn such as the "credit crunch". Consequently, owner-managers find it more difficult to raise finance for working capital due to the higher cost of borrowing, the effect of declining property value on the ability of owner managers to provide the necessary collateral, and the perception that the banks have become even more risk averse than they were already. Afza and Nazir (2007) observed that firms try to keep an optimal level of working capital that maximizes their value and the efficient management of Working Capital is likely to yield significant results and its neglect can be highly dangerous to any firm (Christopher & Kamalavalli, 2009). Filbeck and Krueger (2005) said that the role of quality working capital management was indubitable and the viability of business relied on effectively managing inventory, accounts receivable and accounts payable. Firms were able to reduce financing costs and increase the funds available for expansion by minimizing the amounts of funds tied up in current assets. Working capital management is the decision which deals with the relationship between short term assets and short term liabilities. An efficient working capital management will improve the firm's liquidity and the firm's value can be maximized by having an optimal level which meets working capital demands. Efficient working capital management can reduce the possibility of involving in financial constraints, reduce financial

costs, and avoid the risk of bankruptcy (Luo, Lee, & Hwang, 2009). Autukaite and Molay (2011), admit the importance of efficient working capital management in their study.

THEORETICAL REVIEW

Several approaches have been propounded which help to give a better understanding of working capital in an organization and some of these theories relate directly to the management of working capital while others only found relevance to working capital management indirectly.

Agency Theory

An agency relationship arises when one or more principals (e.g. the owners) engage another person as their agent to perform a service on their behalf. This requires the delegation of some decision-making authority to the agent. Agency theory (Jensen and Meckling, 1976), espoused that conflict of interest between shareholders and managers could affect the efficiency of investment and liquidity decision of management and this can have substantial impact on working capital. Organizations with weak monitoring and few discipline instruments on management decision could provide a platform for managers to invest in project with negative net present value or fail to invest in project with positive net present values. The theory also inferred that a reduction in the day's sales outstanding may imply a consequent reduction in the day's to pay accounts payable, excluding the financial distress case where a reduction in the sales payment outstanding is paralleled with an increase of accounts payable (Blasio,2005). Inversely, an enlargement of the days' sales outstanding (accounts receivable) imply an enlargement of the days to pay accounts payable; i.e., a better implementation of short term trade credit strategy on the receipt of accounts receivable will provide a reduction on the volume of accounts payable compatible with a cost reduction strategy.

Modigliani-Miller Leverage Irrelevant Theory

Modigliani and Miller approach to capital theory, devised in the 1950s advocates' capital structure irrelevancy theory. This suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has lower debt component has no bearing on its market value. Rather, the market value of a firm is dependent on the operating profits of the company. This approach was devised by Modigliani and Miller during 1950s. The fundamentals of Modigliani and Miller Approach resemble that of Net Operating Income Approach. Modigliani and Miller advocate capital structure irrelevancy theory. This

suggests that the valuation of a firm is irrelevant to the capital structure of a company. Whether a firm is highly leveraged or has lower debt comp on, Modigliani and Miller Approach further states that the market value of a firm is affected by its future growth prospect apart from the risk involved in the investment. The theory stated that value of the firm is not dependent on the choice of capital structure or financing decision of the firm. If a company has high growth prospect, its market value is higher and hence its stock prices would be high. If investors do not see attractive growth prospects in a firm, the market value of that firm would not be that greatest in the financing mix, it has no bearing on the value of a firm. The capital structure of a company is the way a company finances its assets. A company can finance its operations by either debt or equity or different combinations of these two sources. The capital structure of a company can have a majority of debt component or majority of equity, only one of the 2 components or an equal mix of both debt and equity. Each approach has its own set of advantages and disadvantages. There are various capital structure theories, trying to establish a relationship between the financial leverage of a company (the proportion of debt in the company's capital structure) with its market value. One such approach is the Modigliani and Miller Approach.

Modigliani and Miller (1958) give a background to the theory of business finance i.e., capital structure irrelevance proposition. There was no generally accepted theory of capital structure before Modigliani and Miller. They first assumed a firm with a set of expected cash flows, when the firm chooses a certain proportion of debt and equity to finance its assets, all that it does is to divide up the cash flows among investors. Investors are assumed to have equal access to financial markets, which allows for homemade leverage. The investor can create any leverage that he/she wanted but not offered, or the investor can get rid of any leverage that the firm took on but was not wanted.

Price Discrimination Theory

Market power of firms can be enhanced considerably by practicing price discrimination through trade credit as buyers are heterogeneous. Mostly, firms enjoying high price-cost margin are found to resort to price discrimination (NBE, 1996). Trade credit follows industry practice Its application is limited and can be used selectively. Customers who have low default risk and can obtain institutional finance at better terms may not be willing to accept trade credit because its implicit cost is higher than that of institutional finance. This makes the offer only attractive to high-risk

marginal customers whose access to institutional finance is prohibitively costly raising the incidence of bad debts (Bhattacharya, 2009). The term differential pricing is also used to describe the practice of charging different prices to different buyers for the same quality and quantity of a product, but it can also refer to a combination of price differentiation and product differentiation. Other terms used to refer to price discrimination include equity pricing, preferential pricing, and tiered pricing.
Within the broader domain of price differentiation, commonly accepted classifications are mentioned as follows:

- **Personalized pricing (or first-degree price differentiation)** — selling to each customer at a different price and this is also called one-to-one marketing. The optimal incarnation of this is called perfect price discrimination and maximizes the price that each customer is willing to pay.
- **Product versioning or simply versioning (or second-degree price differentiation)** — it offers a product line by creating slightly different products for the purpose of price differentiation, i.e. a vertical product line which is another name given to versioning is menu pricing.
- **Group pricing (or third-degree price differentiation)** — this divides the market in to segments and charging the same price for everyone in each segment. This is essentially a heuristic approximation that simplifies the problem in the face of the difficulties with personalized pricing. Typical examples include student discounts and seniors' discounts.

Transactions Costs theory

The transaction cost approach to the theory of the firm was created by Ronald Coase (1937). Transaction cost refers to the cost of providing for some good or service through the market rather than having it provided from within the firm. Coase (1937) describes in his article "The Problem of Social Cost" the transaction costs he is concerned with: In order to carry out a market transaction it is necessary to discover who it is that one wishes to deal with, to conduct negotiations leading up to a bargain, to draw up the contract, to undertake the inspection needed to make sure that the terms of the contract are being observed, and so on.
More succinctly transaction costs are:

- search and information costs
- bargaining and decision costs
- policing and enforcement costs

Coase (1937) contends that without taking into account transaction costs it is impossible to understand properly the working of the economic system and have a sound basis for establishing economic policy. The Nature of the Firm by Ronald Coase (1937), observes that market prices govern the relationships between firms but within a firm decisions are made on a basis different from maximizing profit subject market prices. Within the firm decisions are made on through entrepreneurial coordination. Ronald Coase (1937) gives the origin of 'The Nature of the Firm' as a course in the organization of the business unit which he taught in 1932. He noted that there were inconveniences of market transactions, but if transactions were not governed by the price system there had to be an organization. The object of a business organization is to reproduce the conditions of a competitive market for the factors of production within the firm at a lower cost than the actual market. If an organization exists to reduce costs why then is there any market transaction at all? Coase (1937) gave two reasons:

i. The costs of organizing additional transactions rise with scale and are equated with the costs of additional market transactions;
ii. The organization of bigger firms may not reproduce the effects of market conditions.

In presenting the "Coase Theorem", Coase (1937) argued that in the absence of transaction costs many surprising results hold. The Coase Theorem says that even in the presence of externalities (although he doesn't use that term) if there are no transaction costs to create private agreements the levels of productions of goods will be the same no matter which party to an externality has legal right to compensation. This means that the intervention of the government in the case of externality doesn't affect production if there are no transaction costs. Intervention of the government in such cases does affect the distribution of income. The economics profession has focused upon the content of the proposition rather than the fact that significance of the presence or absence of transaction costs. Trade credit may reduce the transactions costs of paying bills. A buyer might accumulate his bill payment obligations and pay them monthly or quarterly rather than paying bills every time goods are delivered. This enables an organization to separate the payment cycle from the delivery schedule (Ferris, 1981). In a situation where the firm's products enjoy strong seasonal consumption patterns, the firm may have to build up large inventories so as to maintain smooth production cycles. This could be financed in two ways. Firstly, the firm could lower price in order

to affect early sales but, this may attract menu costs and loss in discretionary ability. Secondly, by offering trade credit selectively, both across customers and over time, the firm may be able to manage its inventory position better (e.g. the classic Harvard Business School case, Harrington Corporation (Emery, 1987). The firm can thus reduce warehousing costs, especially if its customers have a better ability to carry inventory.

Trade off Theory

Trade theory proposes that trade-off theory between liquidity and profitability; gaining more of one means giving up some of the other. At one end of the spectrum, there are highly liquid firms which are not very profitable while at the other end are firms which are highly profitable but are not very liquid. Trade-off theory can be to Pareto optimality, though Pareto optimality refers to the redistribution of resources amongst economic agents. The theory of trade-off implies that, for a firm to pursue a business goal, it requires being worse-off in the pursuit of another goal. The basic challenge is therefore to determine where in the middle ground the firm should reside (Bhattacharya, 2001). Proponents of the trade-off approach are focusing their efforts mainly on developing dynamic structural trade-off models. An attractive feature of these models is that they try to provide a unified framework that can simultaneously account for many facts (e.g. Leary & Roberts (2004) and Ju*et al.*, (2004)). A well-managed working capital promotes a company's well-being on the market in terms of liquidity and it also acts in favor for the growth of shareholder value *(Jeng-Ren, et al., 2006).* Investment in working capital involves a balance/trade-off between risk and profitability because investment decision which leads to increase in profitability will be inclined to increase risk and vice versa. Efficiency in managing working capital also increases cash flow to the firms which in turn increase the growth opportunities for the firms and return to the shareholders (Ganesan, 2007). Largay and Stichney (1980) revealed that W.T. Grant, a nationwide chain of department stores was bankrupt because of deficit in cash flows from operations in eight of the last ten years of its corporate life. Working Capital Management is a continuous function which is linked to the survival of firms. Firms where working capital management is not given due consideration cannot survive for a longer period (Dong & Su, 2010). Management of fixed assets falls within the realm of capital budgeting while the management of working capital is a continuing function which involves control and flow of financial resources circulating in the firm in one form or the other. The optimum situation for most companies is when

they manage financing of both expected and unexpected upcoming events without experiencing any financial distress (Maness & Zietlow, 2005). Michna, (2007), is of the opinion that, the efficient management of Liquidity is particularly important for small firms at a time of economic downturn such as the 'credit crunch'. Consequently, owner-managers find it more difficult to raise finance for working capital due to the higher cost of borrowing, the effect of declining property value on the ability of owner managers to provide the necessary collateral, and the perception that the banks have become even more risk averse than they were already. Afza and Nazir (2007), observed that firms try to keep an optimal level of working capital that maximizes their value and the efficient management of working capital is likely to yield significant results and its neglect can be highly dangerous to any firm (Christopher & Kamalavalli, 2009). Also, they indicated that 'the poor' or 'careless' financial management is a major cause of small businesses failure.

Filbeck and Krueger (2005), they took industry membership into consideration when estimating stock price reaction against working capital management performance. They noticed that the role of an efficient working capital management was indubitable and the viability of business relied on effectively managing inventory, accounts receivable and accounts payable. Firms were able to reduce financing costs and increased the funds available for expansion by minimizing the amounts of funds tied up in current assets. There existed significant differences between industries in working capital measures across time. In addition, working capital measures, themselves, change significantly within industries across time. The above studies indicate that the working capital management has become a very important part of a firm's financial management because its management not only affects the survival of firm but the profitability of the firm also depends on how effectively and efficiently working capital is utilized in the firm's operations. Therefore, it is vitally important to see how a trade-off can be maintained in two conflicting goals of Profitability and Liquidity. Under perfect capital market assumptions, holding cash neither creates nor destroys value. The firm can always raise funds from capital markets when funds are needed, there are no transaction costs in raising these funds, and the funds can always be raised at a fair price because the capital markets are assumed to be fully informed about the prospects of the firm (Moyers, 2005). The trade-off theory suggests that firms target an optimal level of liquidity to balance the benefit and cost of holding cash. Eljelly (2004) adds that firms save transaction costs to raise funds and do not need to liquidate assets to make payments. Moreover, the

firm can use liquid assets to finance its activities and investment if other sources of funding are not available or are extremely expensive. According to Eljelly (2004), the concern of business owners and managers all over the world is to devise a strategy of managing their day to day operations in order to meet their obligations as they fall due and increase profitability and shareholder's wealth. The importance of liquidity management as it affects corporate profitability in today's business cannot be over emphasis. The crucial part in managing working capital is required maintaining its liquidity in day-to-day operation to ensure its smooth running and meets its obligation (Eljelly, 2004). Liquidity plays a significant role in the successful functioning of a business firm. A firm should ensure that it does not suffer from lack-of or excess liquidity to meet its short-term compulsions (Bhunia, 2010). The dilemma in liquidity management is to achieve desired trade-off between liquidity and profitability (Raheman and Nasr, 2007). According to *Charitou et al. (2010),* management of current assets and current liabilities is important in creating value for shareholders. If a firm can minimize its investment tied up in current assets, the resulting funds can be invested in value-creating projects, thereby increasing the firm's growth opportunities and shareholders' return. Filbeck and Krueger (2005) point out that the ability of financial managers to effectively manage receivables, inventories, and payables has a significant impact on the success of the business. If capital invested in cash, trade receivables, or inventories is not sufficient, the firm may have difficulty in carrying out its daily business operations. *Charitou et al. (2010)* emphasize the trade-off between liquidity and profitability when they argue that working capital management can play an essential role not only in a firm's profitability and risk, but also in its value.

The Cost Trade-off Theory

Cost of liquidity and illiquidity are involved in maintaining a particular level of current assets. Very high level of current assets means excessive liquidity hence return on assets will be low as funds are tied up in idle cash and stocks earn nothing while high levels of debtors reduce profitability. Therefore, cost of liquidity through low rates of return increases with the level of current assets. Conversely, cost of illiquidity means holding insufficient current assets whereby a firm will be unable to honor its obligations forcing it to borrow on short-term at high interest rates. This adversely affects a firm's credit worthiness and may limit future access to funds and possible insolvency.

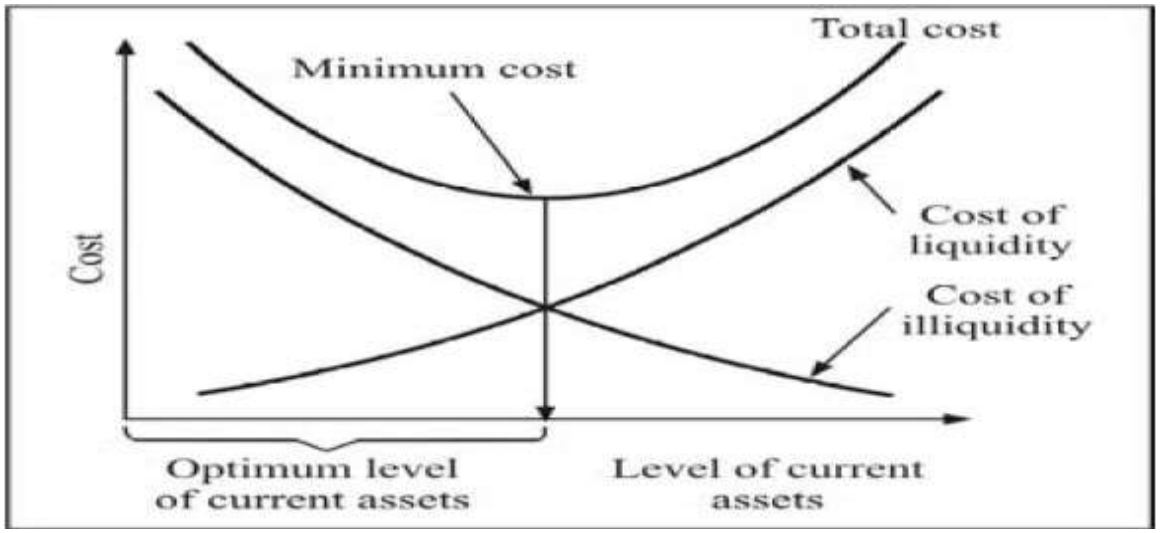

Figure 2.3: Cost Trade-off
Source: I. M. Pandey (2010): *Financial Management* New Delhi: Vikas Publishing House PVT Ltd.

Figure 2.3 above shows how a firm should balance the cost of liquidity and cost of illiquidity at equilibrium. To make sure the optimal level of working capital management can be reached, there are four dimensions of working capital management to be considered: cash management, inventory management, account receivable management (debtor management) and account payable management (creditor management). Each element has its own characteristics.

However, managers should take each component into consideration as a whole, since a trade-off exists in the relationship of each component. For instance, "a large inventory and a generous trade credit policy may lead to higher sales, large inventory and a generous trade credit allows customers to assess product quality before paying (Long, Malitz & Ravid (1993); and Deloof and Jegers (1996).
Following the review of relevant theories, this study adopts the theory of working capital and sales as propose by Ernest & William (1975*)* and Trade test theory. This is because they fit into the objective of this study.

EMPIRICAL REVIEW
Many researchers have studied working capital from different views and in different environments, the following ones were found very interesting and useful for this research. Starting with studies conducted in the developed nations. Berger and Bonaccorsi (2003), used annual data of commercial banks in the United States of America from 1990 to 1995, supported that leverage has a direct impact on agency cost which influences firm

performance. They proposed that high leverage or a low equity capital ratio causes to reduce the agency cost related to outside equity and raises firm value. Their result showed that a 1% increase in leverage decrease equity capital ratio surrenders a predicted 6% increase in profit efficiency. Filbeck and Krueger (2005) highlighted the importance of efficient working capital management by analyzing the working capital management policies of thirty two (32) non-financial industries in the US. According to their findings, significant differences exist among industries in working capital practices overtime. Moreover, these working capital practices, themselves, change significantly within industries overtime. Pandey and Upadhyay (2007) had undertaken the study to evaluate the efficiency of management of working capital in Bokaro Steel Plant during the period from 1999 to 2005. Results show that position of payment of liability was satisfactory but the management of inventory and receivable was good. Howorth and Westhead (2003) studied the position of working capital management of small firms. They indicated that those firms using less working capital have lower growth rates, less external financial resources, less credit purchases, shorter manufacturing cycles and less cash sales.

Negarbo (2006) selected 250 firms as the sample to test the working capital management in them. The conclusions showed that predicting cash flows and growth rate of the firms are the major indicators of working capital management. They also found that changing the size and compound of the assets are not significantly affected by the cash flows prediction and sales growth. They are highly influenced by some factors such as the business nature of the firms, sales, firm size and profitability. The impact of working capital management on the value of 150 firms during 1990 to 2004 was examined by Laplent (2005). It was found that the trends of the firms, size and future sales growth affect the efficiency of the working capital management. The positive relationship between working capital management and firms' performance was confirmed by the authors. Samiloglue and Demirnes (2008) tried to find whether the profitability and working capital management of a sample of Turkish listed firms are related using data between 1998 and 2007 and they documented that average collection period, inventory turnover, leverage and profitability are in significant inverse relationships. However, it was found that growth and profitability are directly associated. Gill *et al., (2010),* showed that the cash conversion cycle and profitability are related and this is identified through gross operational earnings. Their study concerned the working capital management and the profitability of the American firms. *Enqvist et al (2011)* documented that there is a negative relationship between cash

conversion cycle and profitability. Nobanee and Alhajjar (2011) found that the managers might increase the profitability and operating cash flows through shortening the cash conversion cycle and average collection period. *Moyer et al, (2003),* found that working capital consists of a large portion of a firm's total investment in assets, 40% in manufacturing and 50-60% in retailing and wholesale industries respectively. The firm could reduce its financing cost and increase the funds available for expansion if they minimize the funds tied up in current assets. They found that cash helps to keep the firm liquid. It enables the firm to pay its obligations and also protects the firm from becoming bankrupt. Scher (1989), analyzed that by implementing best practices in working capital, companies can strengthen strong cash flow levels, improve profitability, budgeting and forecasting process, predictability and manageability of results, heighten risk visibility and reduce reaction time. Shin and Soenen (1998), highlighted that efficient Working capital management is very important for creating value for the shareholders. Cote & Latham (1999), argued the management of receivables, inventory and accounts payable have tremendous impact on cash flows, which in turn affects the profitability of firms. Each of the Working capital items (i.e., cash, receivables and inventories) helps in the management of firms in its own particular way.

Deloof (2003) analyzed a sample of large Belgian firms for the period 1992-1996 and the results confirmed that Belgian firms can improve their profitability by reducing the numbers of day's accounts receivable are outstanding and reducing inventories. He argued that this finding, which appears contradictory at first glance, is the result of a shortcoming in Pearson correlations, which do not allow causes to be distinguished from consequences. A negative correlation is thus consistent with the view that highly profitable firms usually afford their suppliers shorter payment periods, as they have the financial resources to do so. He observed that profitability affects accounts payable days, not vice versa. The study found that firms can raise their performance by shortening the periods for receivables collection and inventory conversion. He also reported an unanticipated negative impact associated with the number of days for accounts payable and that poorer firms prolong the time to pay their debts. There is negative relationship between accounts payable period and profitability measures; however, except for operating profit margin this relationship is not statistically significant. The results also show that there exists significant negative relationship between cash conversion cycle and profitability measures of the sampled firms. No significant relationship between current assets to total assets ratio and profitability measures has

been observed. On the other hand, findings show that a highly significant positive relationship between current liabilities to total assets ratio and profitability. Deloof and Lazaridis (2006) both observed a negative correlation between accounts payable and firm profitability, arguing in the same direction. Advocate greater attention to working capital management and the optimized handling of the various components of the cash conversion cycle

METHODOLOGY

The study is an ex-post facto research based on secondary data obtained after the event. In this study, the selected metal manufacturing companies were used to represent the cross-sectional units, while period of the study chosen was 2000 to 2015. The period 2000-2015 was chosen in order to get accurate data. Moreover, this period was chosen due to the fact that metal companies selected were listed on the Nigeria Stock Market in year 2000 hence the need to gather data from year 2000 upwards. In the literature, panel data refers to data sets made up of numerous observations on each sampling units or cross-sectional unit over time, this is considered appropriate for this study because it has the ability to control individual heterogeneity and provide flexibility in modeling difference in behaviors across cross-section (Wooldridge, 2010). The population for this study consists of all fifteen (15) Metal Manufacturing Companies operating in Osun State as listed by Osun State Metal Fabrication Association(OSSMFA) as at December, 2015, from which the needed sample was taken. Purposive sampling method was used in this study; the reason for the choice of this sampling method was because of data that were readily available. From the population of fifteen (15) Metal Manufacturing Industries in Osun State, Nigeria, three metal companies were selected. They are: Lawood Metals Company Nigeria Limited, Young Owotutu Metal Fabrication Company, and Rasdec Metal Construction. The criteria for their selection were:

(i) The companies had been listed on the Nigeria Stock Exchange Market by year 2000.
(ii) The Companies had been publishing their financial statements from the year 2000 upwards and
(iii) The companies had been active participants at the Stock Market from year 2000 upwards

All these three conditions were fulfilled by the three selected Metal Companies from the Study area. The study employed secondary data obtained from annual financial reports of the selected metal manufacturing companies for the period 2000 to 2015. A descriptive analysis is one that is

just to be reported on with no conclusion drawn about influence. The independent variables are account receivable, account payable and inventory. The dependent variables which capture the profitability of the firms are represented by return on capital (ROC) and profit after tax (PR).

MODEL SPECIFICATION

The essence of an econometric modeling is to represent the phenomenon under investigation in such a way that it enables the researcher to attribute numerical values to the concept. The model employed in this study takes a lead from the work of Radchenko (2005), with minor modifications to suit the objectives of this study.

The functional model use for this study is defined as;

PR=f (ACR, ACP, INV) ---------- (3.1)

ROC = f (ACR, ACP, INV) ---------- (3.2)

In equation form, equation 3.1 and 3.2 are re-defined as;

$$PR_t = \alpha_0 + \alpha_1 ACR_t + \alpha_2 ACP_t + \alpha_3 INV_t + \varepsilon_t \ldots (3.3)$$

$$ROC_t = \beta_0 + \beta_1 ACR_t + \beta_2 ACP_t + \beta_3 INV_t + \varepsilon_t \ldots (3.4)$$

Where:

PR represents the total profit of the firm less tax;

ACR is accounts receivable of the firm;

ACP is accounts payable of the firm;

INV is the firm's inventory;

β_0 is the intercept,

$\alpha_1 - \alpha_3$ and β_1-β_3 are the parameters of the variables while,

ε_t is the stochastic error term.

Profit after Tax (PRt) is the function of accounts receivable, accounts payable and inventory..

A – Priori expectation for the above model are stated below β_1, β_3, β_4, β_5, and $\beta_6>0$, and $\beta_2<0$.

EMPIRICAL RESULTS

Table 4.1 Showing F-Calculated for Testing the Over all Influence of Working Capital Management on Performance of Organization

SV	SS	DF	MS	F-CAL	P-VALUE
Regression	1209.675	2	604.838	24.064	0.001
Residual	678.634	27	25.135		
Total		29			

Source: Author's computation, 2016

Table 4.2 Showing T-Calculated for Testing the Significant of Individual Regressors of Account Receivable, Account Payable and Inventory Management on Firm Performance

MODEL	UNSTANDARDIZED COEFFICIENT B	STD.ERROR	STANDARDIZED COEFFICIENT BETA	T-CAL	P-VALUE
CONSTANT	0.678	2.569	-	0.264	
ACR(X1)	1.453	0.086	0.674	16.896	0.001
ACP(X2)	34.789	3.785	0.0856	9.191	0.012
INV(X3)	6.862	0.135	0.2004	50.830	0.000

SOURCE: Author's computation, 2016

Table 4.3 Showing Coefficient of Determination for Testing the Overall Contribution Of WCM on Firm Performance

R	R^2	ADJUSTED R^2	STANDARD ERROR OF THE ESTIMATE	DURBIN-WATSON STATISTICS
0.96	0.922	0.905	3.456	1.8956

Source: Author's computation, 2016

INTERPRETATION AND DISCUSSION OF RESULTS

The tables 4.1 to 4.3 above presents the results of the test statistics computed for the test of hypothesis. In table 4.1, the p-value of the F-statistics calculated of 0.001 is less than the critical value of 5%. This implied that the null hypothesis which states that there is no significant relationship between working capital management and firm performance was rejected. Therefore, it could be inferred that there was a significant relationship between working capital management and the performance of the selected metal manufacturing companies. This assertion was in line with the finding of Kolawole (2010) which revealed effective working capital management was a necessary ingredient for firm performance. Bola and Oladejo (2012) concluded that for manufacturing companies in Nigeria to survive there was need for the management of the manufacturing companies to put in place appropriate corporate governance that would enhance effectiveness in working capital management. In fact, in table 4.2,

it was found that the p-value of the t-calculated for account receivable of 0.001 was less than the critical value of 5%. This mean that the null hypothesis which stated that account receivable was not significant on the selected manufacturing companies performance was rejected. In addition, the p-values of t-statistics computed for account payable and inventory management of 0.012 and 0.000 respectively were less than the critical value of 5%, hence, it could be inferred that account payable and inventory management were significant on firm performance. Effective inventory management according to Dele (2006) could has a direct impact on the profitability of an organization. This was possible based on the fact that effective management of inventory always ensued that the cost of managing inventory was reduced to a be minimum. In addition, the ability of firm to clear their account in time enable firm to operate within its limited resource for the betterment of the firm profitability position.

Moreover, in table 4.2, the regression coefficients obtained for account receivable, account payable and inventory management of 0.678, 1.453 and 34. 789 were positive. This indicated the fact that appropriate management of account receivable, account payable and inventory a unit improvement by the firm in managing their account receivable, account payable and inventory efficient would lead to a more than a unit increase in the firms' profitability performance. Hence, it could be asserted that there was a direct relationship between parameters of working capital management and firms' performance.

Furthermore, in table 4.3, the coefficient of determination obtained of 0.922 revealed the fact that 92.20% of the selected metal manufacturing companies' performance could be ascribed to effective management of account receivable, account payable and inventory. Therefore, account receivable, account payable and inventory were good predictor variables for firm performance. Also, the Durbin-Watson statistics obtained of 1.8965 revealed the fact that there was existence of a minimum auto-correlation among the variables of the study. On the basis of this, it could be asserted that account receivable, account payable and inventory if effectively manage could also brought about an improvement in the organization.

CONCLUSIONS AND RECOMMENDATION

Conclusions

The prime intention of this research paper was to evaluate the impact of working capital management on organization performance with particular focused on metal manufacturing companies in Nigeria. The result obtained

from the study indicated that there was a significant positive effect of working capital management on organizational performance. It could also be concluded that account receivable as a parameter of working capital management was significant on profitability of the metal manufacturing companies. The resultant implication of this was that effective monitoring of account receivable to ensure that debtors of the metal companies paid as at when due could increase the profitability of the metal companies.
Also, it could be asserted that account payable had a direct significant impact on profitability of the selected manufacturing companies. In addition, inventory management was significant on the profitability of the metal companies.

RECOMMENDATIONS

The impact of working capital management on organization performance was the cardinal objective of the study. Based on the conclusions of the study, the following recommendations were made.

- The management of the metal firms should put in place appropriate committee that would see to the recovery of unrecoverable debts of the companies.
- There was need for the management of the metal companies to employ accountants that were versed in the reconciliation of account payable with the existing companies' performance. This was imperative in order to determine the actual performance of the company in term of profitability after removing the creditors entitlement and
- Inventory management of the selected metal manufacturing companies should be designed in such a way as to minimize the cost of holding inventory by maintaining an acceptable level of stock that would enhance continuous productivity.

REFERENCES

Afza, T. & Nazir, M. S. (2007). Is it Better to be Aggressive or Conservative in Managing Working Capital. *Journal of Quality and Technology Management, 3(2), 11-21?*

Akinwande, G.S. (2009).*Working Capital Management in Telecommunication Sector, A Case Study of VGC Telecoms.* Thesis for the master's degree in Business Administration submitted to School of Management, Blekinge Institute of Technology, University of Karlskrona, Sweden.

Autukaite & Molay (2011).Cash holding, working capital and fir value: evidence from France, *International conference of the French Finance association (AFFI), 11-13*

Blasio, G. (2005). Does Trade Credit Substitute Bank Credit? Evidence from Firm level Data. *Economic Notes, 34(1),85-112.*

Bhattacharya, H. (2009). *Theories of trade credit. In H. Bhattacharya, Working Capital: Strategies and Techniques*. New Delhi: PHI Learning Pvt. Ltd, 36-37.

Bostos, MA: Pearson Prentice Hall. *Gujarati, D. 2004, „Basic econometrics" 4th ed McGraw−Hill Companies.*

Christopher, S. B. &Kamalavalli, A. L. (2009). Sensitivity of profitability to working capital Management *in Indian corporate hospitals. Retrieved from http://ssrn.com/abstract.*

Deloof, M., & M. Jegers, (1996). Trade credit, product quality, and intragroup trade: some *European evidence, financial management 25, 33-43.*

Deloof & Lazaridis et al. (2006). Both observed a negative correlation between accounts payable and firm profitability, arguing in the same direction.

Dong, H, J. Su,(2010).The relationship between working capital management and profitability: A Vietnam case .*International Research Journal of Finance and Economics, Issue 49 .*

Eljelly, A. (2004). Liquidity-Profitability Trade-off: An empirical Investigation in An Emerging Market. *International Journal of Commerce & Management, 14(2). 48 – 61*.

Erich &Helfert, (2001). *The Financial Analysis: Tools and Techniques A Guide for Managers.* McGraw-Hill Companies US Finance and Economics, 24(3), 186-193.

Filbeck,G. & Krueger, T. (2005). Industry Related Differences in Working Capital Management, *Mid-American Journal of Business, 20(2), 11-18, 2005.*

Gitman, L. J. (2009), *Principles of Managerial finance (12th Ed.).*

Gitman, L. A. (2005), *Principles of Managerial Finance*, (11th Ed). New York: Addison Wesley Publishers.

Hillier, D. Ross, S., Westerfield, R., Jaffe, J. & Jordan, B. (2010),*Corporate Finance*. Berkshire: McGraw-Hill.

Jensen. M. & Meckling. W.(1976), Theory of the firm: managerial behavior, agency costs and Ownership structure*. Journal of American Academy of Business,10 (2)149-155.*

Jeng-Ren, C., Li, C. & Han-Wen, W. (2006),The determinants of working capital management. *Journal of American Academy of Business, Cambridge, 10(1), 149-155*

Kumar,V.(2010). Debtor management,accounting education, retrieved from *http://www.svtuition.org/2010/03/debtor-management-finance.html*

Lamberson M (2005). Changes in Working Capital of Small Firms in Relation to Changes in Economic Activity *Mid-American Journal of Business, 10(2), 45-50*.

Leary, M. and M.R. Roberts, (2004). Do firms rebalance their capital structures? *Journal of Finance, forthcoming, 23, 45-54*

Long, M.S, Malitz, I.B. and Ravid, S.A., (1993). Trade Credit, Quality Guarantee and Product Marketability, *Financial management 22 (4), 117-127*

Luo, M. M., Lee, J. J. & Hwang, Y. (2009). Cash conversion cycle, firm performance and stock value, Retrieved*fromwww90. Homepage.villanova.edu/Michael./ML_CCC_2009042Management in Indiacorporate hospitals. Retrieved from http://ssrn.com/abstract=1331500*

Maness, T.S. &Zietlow, J.T. (2005). *Short-term financial management.* (3rd Ed).Ohio: South- Western / Thomson Learning.

Michna, A. (2007). Dimensions of organizational learning and linking them with SME performance. Paper presented at the 30th ISBE Conference, *International Entrepreneurship, Glasgow, 7-9 November.*

Modigliani, F. & Miller, M. H. (1958). The Cost of Capital, Corporate Finance and the Theory of Investment. *American Economic Review, 48, 261-297.*

Moyer R C, McGuigan J. R. &Kretlow, W. J. (2005).*Contemporary Financial Management* (10th Ed).New York: South-Western College Publication.

Pandey, I. M. (2005*). Financial Management* (9th Ed).New Delhi: Vikas Publishing House PVT Ltd.

Paramasivanand Subramanian, T.(2009). *Financial management*, Published by New Age

Pass, C.L. & Pike, R.H. (2007). An Overview of Working Capital and Corporate Financing. *Managerial Finance, 10 (3), 1-11.*

Reddy,P.R.,& Kameswarim P. (2004). Working capital management practices in Pharmaindustry: A case study of Cipla Limited. *Management Accountant, 4, 638–44.*

Sanger, J.S. (2001). Working capital: A modern approach. *Financial executive, 69, 23-24*

Shin, H.H. &Soenen. L(1998).Efficiency of working capital management and corporate profitability. *Financial Practice and Education, 8(2), 37-45.*

Van Horne, J. C.& Wachowicz, J. M. (2004).*Fundamentals of Financial Management*, (11th Ed). New York: Prentice Hall Inc

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